AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A computer readable medium storing a computer executable program to reproduce a data format structure and having a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ recorded on the computer readable medium, comprising:

a data area storing at least a portion of the video data having multiple reproduction paths ~~video data~~, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit starting and ending with a reproduction path change point, the interleaving units associated with different reproduction paths being interleaved in the data area, and the video data in each interleaving unit being divided into one or more entry points; and

a management area separate from the data area, the management area storing management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

2. (Currently Amended) The computer readable medium of claim 1, wherein the video data having multiple reproduction paths ~~video data~~ is divided into a plurality of clip files, each

clip file including video data associated with one of the multiple reproduction paths, and each clip file divided into one or more of the interleaving units.

3. (Cancelled)

4. (Previously Presented) The computer readable medium of claim 1, wherein each interleaved unit in at least one clip file includes a same number of entry points.

5. (Previously Presented) The computer readable medium of claim 1, wherein at least two interleaved units in at least one clip file have a different number of entry points.

6. (Cancelled)

7. (Previously Presented) The computer readable medium of claim 1, wherein each entry point map indicates which of the identified entry points is a last entry point in an interleaved unit.

8. (Previously Presented) The computer readable medium of claim 1, wherein each entry point map indicates which of the identified entry points is a first entry point in an interleaved unit.

9. (Previously Presented) The computer readable medium of claim 1, wherein the entry point maps are aligned in time.

10. (Previously Presented) The computer readable medium of claim 2, wherein a management information includes an information file associated with each clip file, each information file including at least one entry point map associated with each clip file, each entry point map identifying entry points in the clip file.

11. (Previously Presented) The computer readable medium of claim 10, wherein each entry point map indicates which of the identified entry points is a last entry point in an interleaved unit.

12. (Previously Presented) The computer readable medium of claim 10, wherein each entry point map indicates which of the identified entry points is a first entry point in an interleaved unit.

13. (Previously Presented) The computer readable medium of claim 10, wherein the entry point maps are aligned in time.

14. (Currently Amended) A computer readable medium storing a computer executable program to reproduce a data format structure and having a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ recorded on the computer readable medium, comprising:

a data area storing a plurality of clip files, each clip file including video data associated with one of the multiple reproduction paths, each clip file divided into entry points of video data, the entry points in each clip file being grouped into one or more interleaving units, and the plurality of clip files being interleaved in the data area on a interleaving unit basis; and

a management area separate from the data area, the management area storing management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~, the management information including an information file associated with each clip file, each information file providing at least one entry point map for the associated clip file, each entry point map identifying entry points in the clip file.

15. (Previously Presented) The computer readable medium of clam 14, wherein each interleaved unit in at least one clip file includes a same number of entry points.

16. (Previously Presented) The computer readable medium of claim 14, wherein at least two interleaved units in at least one clip file have a different number of entry points.

17. (Currently Amended) A computer recordable medium storing a computer executable program to reproduce a data format structure and having a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ recorded on the computer readable medium, comprising:

a data area storing at least a portion of the video data having multiple reproduction paths ~~video data~~, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit being formed of a number of entry points, and the interleaving units associated with different reproduction paths being interleaved in the data area; and

a management area separate from the data area, the management area storing management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~, the management information including at least one entry point

map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

18. (Previously Presented) The computer readable medium of claim 17, wherein the number of entry points is fixed for at least interleaving units associated with a same reproduction path.

19. (Previously Presented) The computer readable medium of claim 17, wherein the number of entry points varies for at least interleaving units associated with a same reproduction path.

20. (Currently Amended) A method of recording a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ on a recording medium, comprising:

recording at least a portion of the video data having multiple reproduction paths ~~video data~~ in a data area of the recording medium, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit starting and ending with a reproduction path change point, and the interleaving units associated with different reproduction paths being interleaved in the data area, and the video data in each interleaving unit being divided into one or more entry points; and

recording management information in a management area separate from the data area, management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~, the management information including at least one entry point

map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

21. (Currently Amended) A method of reproducing a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ recorded on a recording medium, comprising:

reproducing at least a portion of the video data having multiple reproduction paths ~~video data~~ from a data area of the recording medium, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit starting and ending with a reproduction path change point, and the interleaving units associated with different reproduction paths being interleaved in the data area, and the video data in each interleaving unit being divided into one or more entry point; and

reproducing management information from a management area separate from the data area, the management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

22. (Currently Amended) An apparatus for recording a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ on a recording medium, comprising:

an optical recording device configured to record data on the recording medium; and

~~an encoder configured to encode at least multiple reproduction path video data; and~~

a controller, operably coupled to the optical recording device, configured to control the optical recording device to record the ~~encoded~~ video data having multiple reproduction paths ~~video data~~ on the recording medium, the controller configured to~~for~~ control~~ling~~ the optical recording device~~driver~~ to record at least a portion of the video data having multiple reproduction paths ~~video data~~ in a data area of the recording medium, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit starting and ending with a reproduction path change point, ~~and~~ the interleaving units associated with different reproduction paths being interleaved in the data area, and the video data in each interleaving unit being divided into one or more entry point, and

the controller configured to control the optical recording device to record management information for managing reproduction of video data having the multiple reproduction paths ~~video data~~ in a management area separate from the data area of the recording medium, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

23. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction of at least video data having multiple reproduction paths ~~video data~~ recorded on a recording medium, comprising:

an optical reproducing device configured to reproduce data recorded on the recording medium;

a controller, operably coupled to the optical reproducing device, configured to control the optical reproducing device to reproduce at least a portion of the video data having multiple

reproduction paths ~~video data~~ from a data area of the recording medium, the video data having multiple reproduction paths ~~video data~~ being divided into one or more interleaving units, each interleaving unit associated with one of the reproduction paths, each interleaving unit starting and ending with a reproduction path change point, ~~and~~ the interleaving units associated with different reproduction paths being interleaved in the data area, and the video data in each interleaving unit being divided into one or more entry point; and

the controller configured to control the optical reproducing device to reproduce management information for managing reproduction of the video data having multiple reproduction paths ~~video data~~ from a management area separate from the data area of the recording medium, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path.

24. (Previously Presented) The apparatus of claim 22, wherein each interleaved unit in at least one clip file includes a same number of entry points.

25. (Previously Presented) The apparatus of claim 22, wherein at least two interleaved units in at least one clip file have a different number of entry points.

26. (Previously Presented) The apparatus of claim 22, wherein each interleaved unit in at least one clip file includes a same number of entry points.

27. (Previously Presented) The apparatus of claim 23, wherein at least two interleaved units in at least one clip file have a different number of entry points.

28. (Currently Amended) The apparatus of claim 20, wherein the video data having multiple reproduction paths ~~video data~~ is divided into a plurality of clip files, each clip file including video data associated with one of the multiple reproduction paths, and each clip file divided into one or more of the interleaving units.

29. (Currently Amended) The apparatus of claim 21, wherein the video data having multiple reproduction paths ~~video data~~ is divided into a plurality of clip files, each clip file including video data associated with one of the multiple reproduction paths, and each clip file divided into one or more of the interleaving units.

30. (New) The apparatus of claim 22, further comprising:

an encoder configured to encode the video data having multiple reproduction paths.

31. (New) The apparatus of claim 22, further comprising:

a source packetizer configured to packetize the video data.

32. (New) The apparatus of claim 23, further comprising:

a source de-packetizer configured to de-packetize a packet of the video data.

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END OF CLAIM LISTING